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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/685,154	10/10/2000	Claudia J. Quigley	105690-136 (MKS-78)	4588

7590 03/11/2003  
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EXAMINER

FERGUSON, MARISSA L

ART UNIT PAPER NUMBER

2855

DATE MAILED: 03/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/685,154

Applicant(s)

QUIGLEY ET AL.

Examiner

Marissa L Ferguson

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 11 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 and 14-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-20, 22-24, 29-31, 33 and 34 is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-17, 21, 25-28 and 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Claims 1-5,7-17, 21, 25-28 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pandorf et al. (U.S. Patent 5,932,332).

Regarding claims 1,9 and 21, Pandorf et al. teaches an apparatus and method comprising a shell (216), a pressure sensor disposed in a shell (220 and Abstract), a heater (218) attached to a shell (Column 6, Lines 62-65) including heating elements (260,262,264). Pandorf does not explicitly disclose heating elements with different electrical resistances. However, the heating elements are different sizes, therefore it would appear that the resulting resistances would be different.

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Pandorf et al. to include any heating elements with different resistances for any desired intended use, because such modification is well within the level of an ordinary skilled artisan.

Regarding claims 2-5, Pandorf et al. teaches one or more electrical components for applying electrical signals (220, 220a) and a connector (220b) that connects the heating elements in series (262, 264, and Column 19, Lines 15-66).

Regarding claims 7 and 8, Pandorf et al. teaches a conductive flexible diaphragm (210b) and teaches a conductor (Column 22, Lines 63-67 and Column 23, Lines 1-10).

Regarding claims 10-17, Pandorf et al. teaches the method of heating at least a portion of a pressure transducer (Column 20, Lines 16-34), first and second heaters that comprise and appear to directly/indirectly couple to first and second heating elements (220d, 262), first and second heaters applying heat to the shell/pressure sensor (Column 20, Lines 16-34), and applying an electrical signal to first and second heating elements during a first period of time and a second period of time (Column 20, Lines 35-67 and Column 21, Lines 1-35).

Regarding claims 25 and 32, Pandorf et al. appears to teach a housing disposed around a shell (See element 212 and Figure 2A).

Regarding claims 26-28, Pandorf et al. teaches heaters (see element 118) disposed between a shell (116) and a metallic housing (Column 2, Lines 6-8).

2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pandorf et al. (U.S. Patent 5,932,332) in view of Johnston (U.S. Patent 4,176,557).

Pandorf et al. teaches the invention claimed including heating elements directly/indirectly connected to a shell except he does not explicitly disclose first and second heating elements connected in parallel. However, heating elements connected in parallel are common and well known in pressure sensors that contain heaters. For example, Johnston teaches a pressure sensor that discloses two heaters that are disclosed within a housing and are connected in parallel (Column 7, Lines 58-68 and Column 8, Lines 1-20).

Since both Pandorf et al. and Johnston teach pressure sensors with heating elements, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Pandorf et al. to the elements taught by Johnston for the purpose of providing electrical connections between the heating elements.

***Allowable Subject Matter***

3. Claims 18-20,22-24,29-31,33 and 34 are allowed

***Response to Arguments***

4. Applicant's arguments with respect to claims 1-12 and 14-24 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L Ferguson whose telephone number is (703) 305-3194. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other (F) 7:30am-4:00.

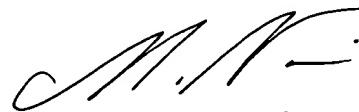
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Marissa L Ferguson  
Examiner  
Art Unit 2855

  
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March 7, 2003

  
MAX NOORI  
PRIMARY EXAMINER